

Review Sheet for September Test: Questions and Clues

You do not have to hand this in. Use it to prepare for the test. Also, go to bengalfrosh.com to access Benson's site. A link to "Review Resources for Unit 1" will be posted there. Be sure to go over all of your handouts (notes, labs, worksheets). Read the questions on those (notes, labs, worksheets) and make sure you understand the answers. The test will be 33 multiple-choice questions. Honors students will have 4 - 5 additional questions where they will have to explain or calculate.

1. Make sure you understand what happened in the Briny Deep Lab. Look it over. Read the follow-up questions and make sure you understand the answers. A video of the lab is posted on Benson's website. Go to www.bengalfrosh.com -> Benson's site
2. What are the three types of ocean currents and what does each type transport?
3. In the "Ice-water Lab", why did the beaker containing ice in salty water get colder than the beaker containing ice in fresh-water?
4. Be sure to study the handout titled, "NOTES: Ocean Currents". Don't try to memorize the notes – Try to understand them. Read the pages assigned on the back of the notes handout.
5. Know how to determine the how much salt and how much water are present if you are given a problem like this: A sample of seawater has a salinity of 40 ‰. This means that 1000 g. of this saltwater would include ? grams of salt and ? grams of water.
6. There will be a question about Antarctic Bottom Water.
7. Be familiar with the salinity of water from different bodies of water such as the Atlantic, the Mediterranean, the Great Salt Lake, the Dead Sea, the Red Sea, etc.
8. What are some natural processes that would decrease the salinity of ocean water?
9. Which of the three things that cause (or influence the direction of) surface currents in the oceans?
10. Why does cold water have a higher density than warm water?
11. Be familiar with the Gulf Stream.
12. What causes El Nino? What happens in the equatorial Pacific when El Nino occurs?
13. How might too many nutrients (from sewage and/or fertilizer) in water lead to a lack of oxygen in the water?
14. What do two important things do algae provide for other organisms?
15. Why is the Mediterranean Sea saltier than the Atlantic Ocean?
16. List the 4 types of water that formed layers in the recent Briny Deep Lab from most dense (bottom layer) to least dense (top layer).
17. What is the primary way that scientists monitor the Pacific Ocean so they can know when an El Nino may be starting?
18. Be prepared to sketch a cross-section of the Pacific during either a normal year or an El Nino year. Be prepared to show and label the winds, the upwelling, the location of warm and cold water, and where the rain would be.

19. What event contributed most directly to the dead zone found where the Mississippi River empties into the Gulf of Mexico?
20. Why does some of the warm water from the Gulf Stream flow toward the area northeast of Greenland?
21. Be familiar with the following terms: algae, plankton, zooplankton, phytoplankton
22. Why can a strong El Nino event cause rain and flooding in Peru?
23. Why is ice less dense than water? Why is cold water more dense than warm water?
24. Why is the water near the equator not as salty as water 25-30 degrees to the north or south?
25. How often does a major El Nino happen?
26. What are the two things that help algae to thrive in surface waters?
27. How have past strong El Ninos impacted our winter weather in Montana?
28. What are two sources of oxygen in surface waters of the oceans?
29. Take some time to look over the density lab and the follow-up questions. If you missed this lab, be sure to watch the pencast on Benson's site. NOTE: Pencasts do not work on all mobile devices.
30. What is the approximate **mass** of 100 mL of water?
31. What is the density of a piece of metal that has a mass of 100 grams and a volume of 25 cm³? Put the answer in correct units.

ATTENTION: HONORS ONLY

The Honors test will also include several more questions. Here are possible topics for those questions.

1. MESPOWs #25 and #110
2. The Dead Zone in the Gulf of Mexico
3. The theory upon which the movie, "The Day After Tomorrow" is based
4. The density lab
5. Calculating salinity in parts per thousand